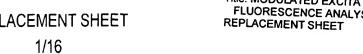
App No.: 10/561,448 Docket No.: 58086-226455 Inventor: Shimon Weiss Title: MODULATED EXCITATION

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### REPLACEMENT SHEET



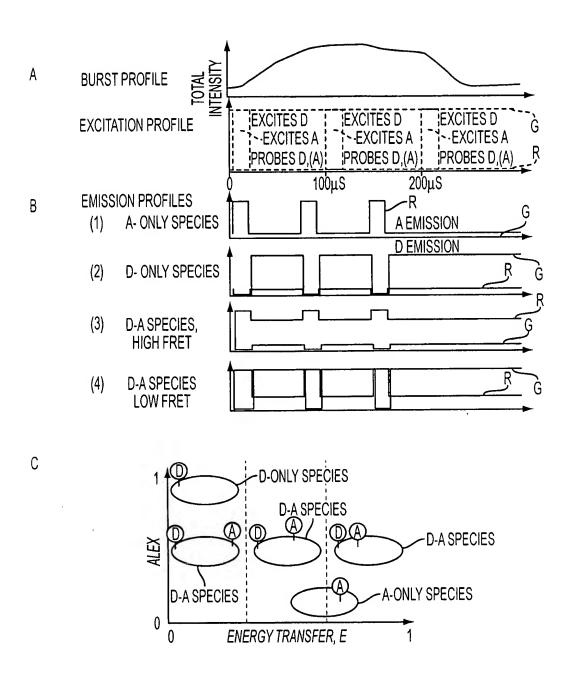


FIG. 1

## REPLACEMENT SHEET 2/16

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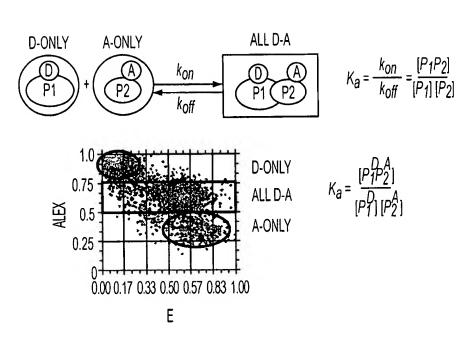


FIG. 2

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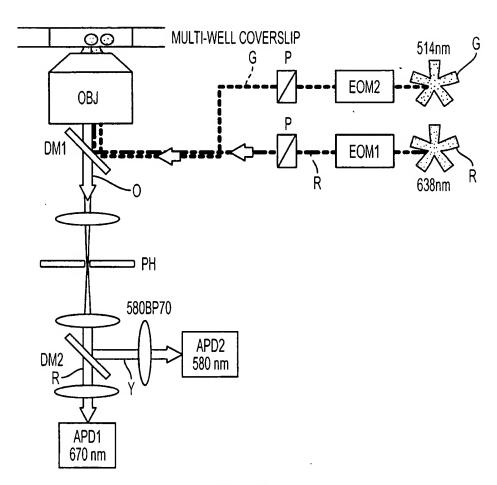
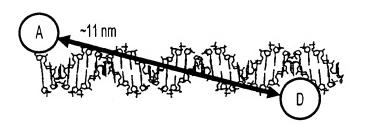
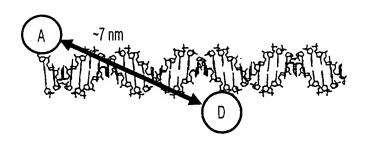


FIG. 3

REPLACEMENT SHEET 4/16

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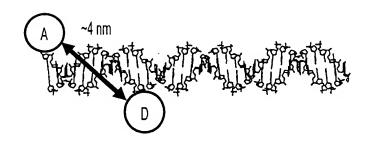


FIG. 4A

REPLACEMENT SHEET 5/16

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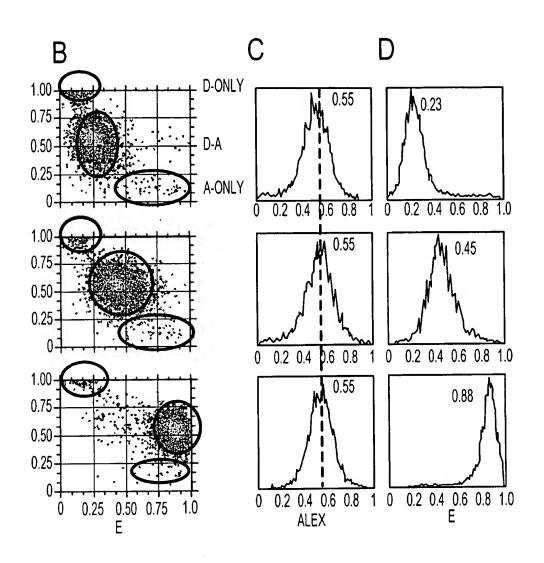


FIG. 4

# REPLACEMENT SHEET 6/16

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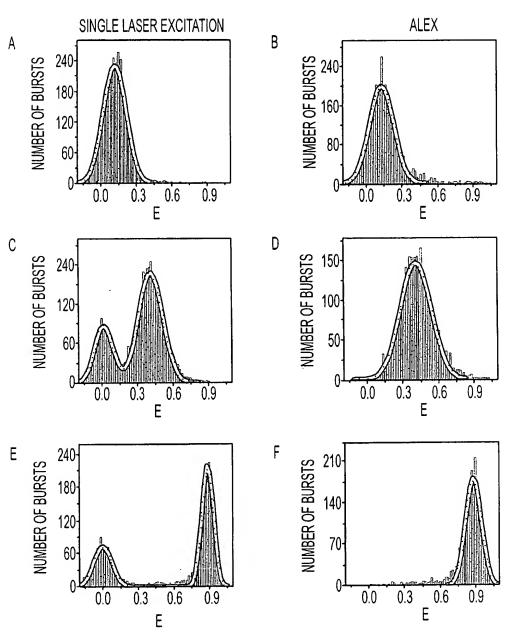
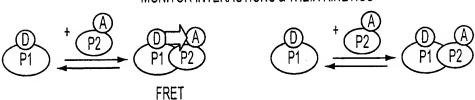


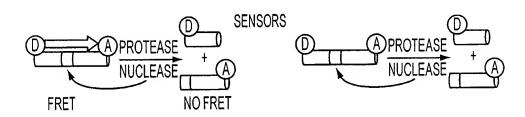
FIG. 5

REPLACEMENT SHEET 7/16

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#### MONITOR INTERACTIONS & THEIR KINETICS



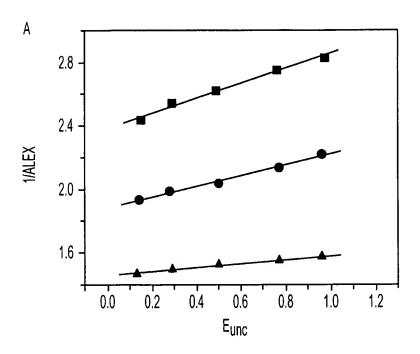


FRET-BASED ASSAY: DISTANCE-CONSTRAINED ALEX-FRET-BASED ASSAY: NO DISTANCE CONSTRAINED (FRET CAN BE 0-100%)

FIG. 6

REPLACEMENT SHEET 8/16

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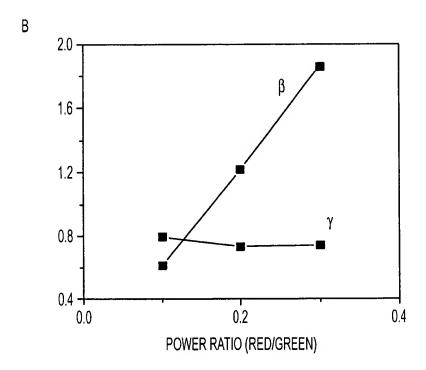


FIG. 7

REPLACEMENT SHEET
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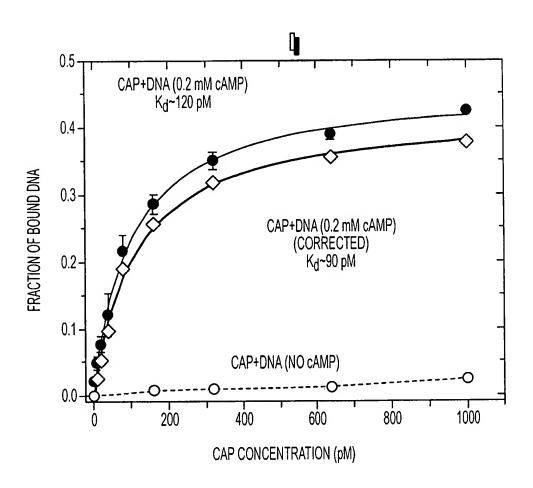


FIG. 8

REPLACEMENT SHEET 10/16

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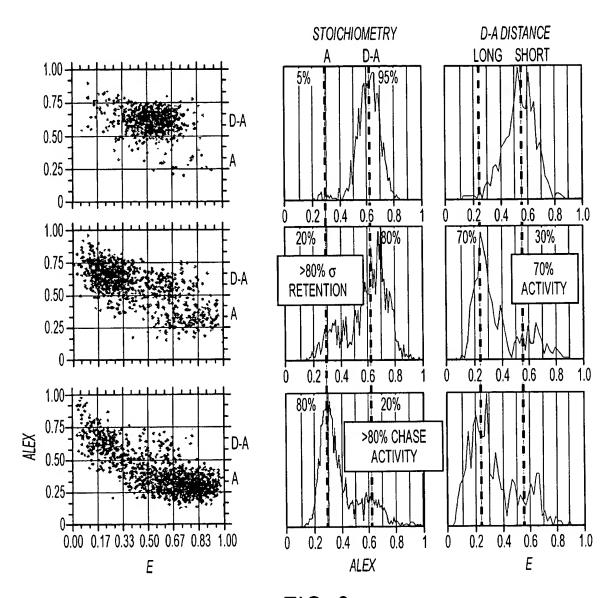


FIG. 9

REPLACEMENT SHEET 11/16

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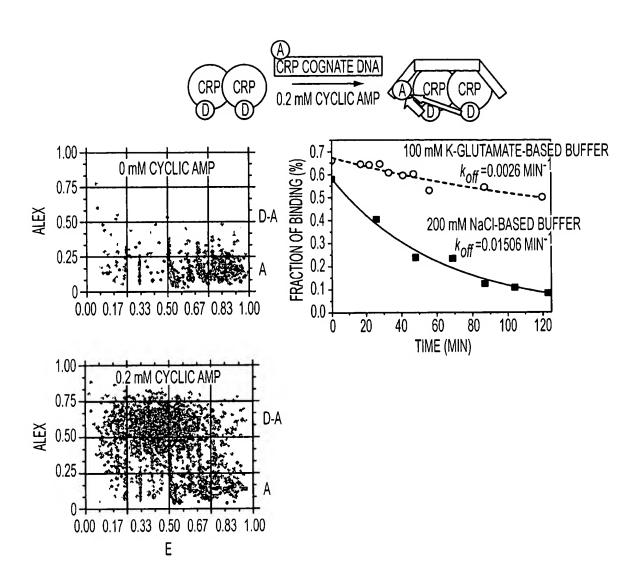
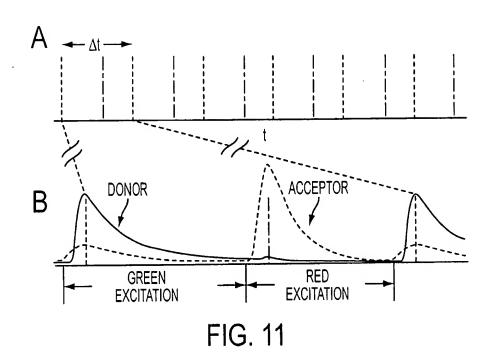


FIG. 10

REPLACEMENT SHEET 12/16

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## REPLACEMENT SHEET 13/16

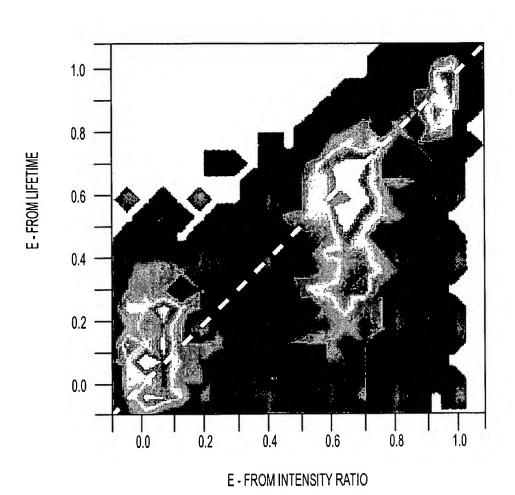


FIG. 12

REPLACEMENT SHEET 14/16

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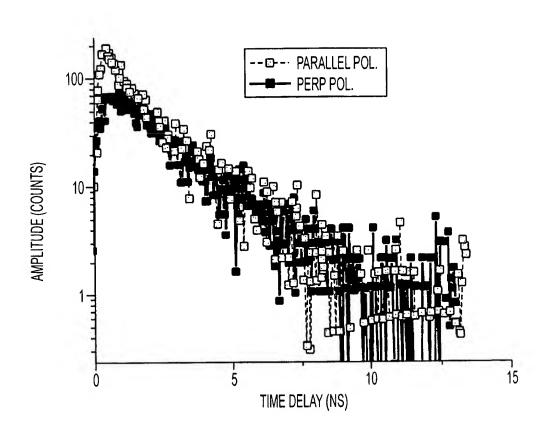


FIG. 13

### REPLACEMENT SHEET 15/16

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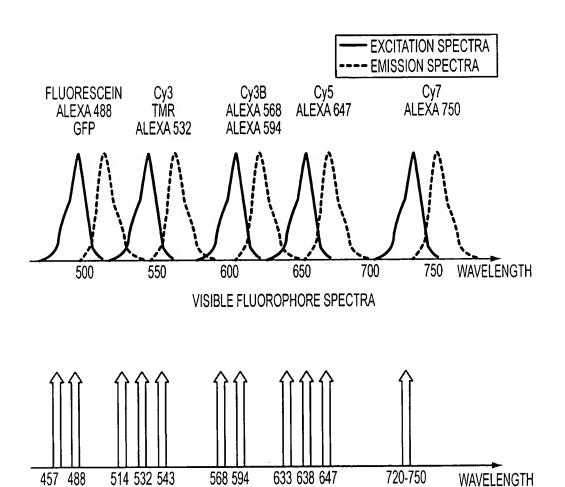
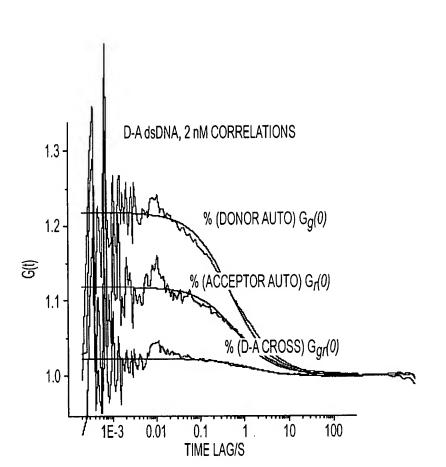


FIG. 14

**EXCITATION LASER WAVELENGTHS (NM)** 

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S) NORMALIZED SUBPOPULATION 
$$Y_D + Y_{DA} + Y_{DA} = 1$$
CONCENTRATIONS

 $Y_D + Y_{DA}(1-F)^2$ 

$$Gg(0) = \frac{1}{N_{TOTAL}} - \frac{Y_{DA}(1-E)^{2}}{[Y_{D} + Y_{DA}(1-E)^{2}]}$$

$$Gr(0) = \frac{1}{N_{TOTAL}} - \frac{Y_{DA}E^{2}k^{2} + Y_{A}}{(Y_{DA}Ek + Y_{A})^{2}}$$

$$Ggr(0) = \frac{1}{N_{TOTAL}} - \frac{Y_{DA}(1-E)Ek}{[Y_{D} + Y_{DA}(1-E)][Y_{DA} + Ek + Y_{A}]}$$

FIG. 15